

ASSESSMENT FOR SUSTAINABLE TOURISM

MODULE 4



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Acknowledgements

The majority of the following material is excerpted or modified from:

Christ, Costas, Oliver Hillel, Seleni Matus, and Jamie Sweeting. 2003. *Tourism and Biodiversity, Mapping Tourism's Global Footprint*. Conservation International and UNEP, Washington, DC, USA.

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IUCN 2004. *Managing Marine Protected Areas: A Toolkit for the Western Indian Ocean*. IUCN Eastern African Regional Programme, Nairobi, Kenya.

United States Department of the Interior. Sept. 1997. *The Visitor Experience and Resource Protection (VERP) Framework: A Handbook for Planners and Managers*. National Park Service, Denver Service Center.



OVERVIEW

The first step in planning for sustainable tourism is to assess what your site has to offer to tourists, and whether it can support tourists' needs and desires in a way that protects and preserves the local environment and culture, and that is also economically feasible.

The first question is whether sustainable tourism should be pursued at all. A SWOT analysis, to define the community's strengths, weaknesses, opportunities and threats, can illuminate this question. If sustainable tourism is to be pursued further, a small planning team can be formed to assess the site and its tourism potential. Important areas of information include the area's natural resources, cultural resources, protected area status and policy environment, tourism industry interest, visitor patterns, infrastructure, and any necessary marketing and promotion.

The planning team can gather this information by using a variety of tools, including existing materials and maps; visiting the MPA as if they were tourists; interviewing residents, tour operators, and tourists; conducting surveys and questionnaires; and organizing meetings and workshops to bring all participants together. As many stakeholders as possible should be involved in the process, particularly the local community and experienced tour operators.

In this module you will develop and use several of these assessment tools for your own area, and begin assessing its potential for sustainable tourism.

LEARNING OBJECTIVES

- ✓ Understand the importance of assessment in planning for sustainable tourism
- ✓ Know what information to gather, and what tools will help you gather it
- ✓ Develop a list of assessment questions that you would like to answer for your own site
- ✓ Develop a visitor survey for your site
- ✓ Conduct preliminary attractions and infrastructure assessments for your own site



LESSON PLAN

4.1 SWOT ANALYSIS

The need for assessment

In the previous module, we discussed the basic concepts of sustainable tourism and the benefits and threats it offers to marine protected areas, and developed a vision for sustainable tourism for MPAs in the Eastern Tropical Pacific Seascape. How can we take concrete steps toward making that vision a reality? A sustainable tourism program must be planned carefully if it is to be successful. The planning process must include a thorough assessment of everything that the MPA and local community have to offer to tourists: inventories of tourist attractions and infrastructural capability, analysis of market demand and competitiveness, and socio-cultural elements. In addition, the assessment must carefully consider conservation issues and other factors that may be negatively impacted by sustainable tourism.

The goal of assessment is to determine whether tourism development is possible that will contribute to conservation and poverty alleviation, maintain the principles of sustainable development, will be supported by the community, and will be economically feasible.

To begin, let's look at a tool for initial assessment of the community's strength and weaknesses. This tool, SWOT analysis, can help determine whether sustainable tourism should be pursued for a given community and MPA.

What is SWOT analysis?

SWOT analysis is an analysis of a community's **Strengths, Weaknesses, Opportunities, and Threats**. It is a planning framework through which communities can articulate their socioeconomic priorities, determine their interest in tourism as a potential income generation activity, their perceived readiness for development, and express their concerns about tourism development. It is most useful as **a first step before detailed assessment begins**.

Why do a SWOT analysis?

Community support and involvement in the design and implementation of a sustainable tourism plan is essential for long-term success of the program. A sustainable tourism program must consider the value of tourism to the community economically, socially, politically, culturally and environmentally. And, the community must have buy-in on all these levels. Community buy-in provides a solid foundation on which to build a sustainable program, but there must be realized benefits by the community for this support to be sustained.



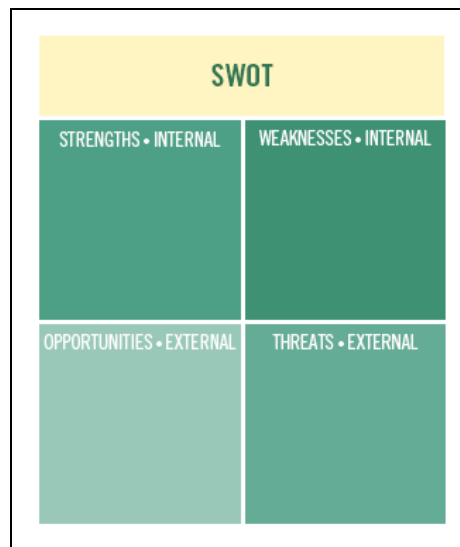
How to do a SWOT analysis

Handout 4.1 - SWOT Analysis Diagram

Handout 4.2 - SWOT Analysis Questions

Usually a SWOT analysis is done by local community members with the guidance of an assessment team. A range of community members should be included to get a realistic picture of the whole community. Be sure that differing literacy levels do not impede involvement for any participants - make text documents accessible through conversations, figures and sketches.

A sample SWOT diagram:



Using the SWOT diagram, the local community members illustrate the primary internal strengths, internal weaknesses, external opportunities, and external threats affecting or potentially affecting successful tourism development in their community. A review of maps and guides may help provide a sense of the relationship of the community to nearby natural resources.

“Internal” strengths and weaknesses refer to realities that affect the community and that they have basic control over, such as the *strength* of a well managed protected area or the *weakness* of a lack of communication between local tourism stakeholders.

“External” opportunities and threats refer to the realities that affect their community, which they do not have immediate control over, such as the *opportunity* of reliable national transportation or the *threat* of national political instability.

Once the sections have been filled in, the Assessment Team can analyze the results and have the participants vote on their top three priorities per section. This will help filter out the minor issues.



SWOT analysis can reveal to the Assessment Team such aspects as:

- **Key issues** regarding strengths, weaknesses, opportunities, and threats and how their impacts may balance or exceed each other.
- **Communication abilities** of the community.
- **The overall attitude** of the local participants - generally positive or negative?
- **Their cohesiveness and capacity to work together.**
- **The destination, government and political structure**, to determine possible points and feasibility of negotiation between the community and national authorities.

The final decision will reflect the community's readiness for tourism development. The Assessment Team can recommend one of three actions:

1. **The rest of the assessment should not proceed** (i.e. sustainable tourism development is not, at present, a practical path for this community and MPA)
2. **It may proceed in part;**
3. **It may proceed in its entirety.**

If the decision is to proceed, the Assessment Team will want to identify key local stakeholders who can help participate.

Exercise: SWOT Analysis

Using the SWOT chart and working in small groups, perform a SWOT analysis for your own MPA. Once the SWOT analysis is conducted, put yourself in the role of an assessment team: analyze the results and determine the top three priorities in each section. Present the small group's findings to the large group.

4.2 ASSESSMENT & DIAGNOSTIC PROCEDURES

Building an assessment team

Handout 4.3 - SWOT Planning Process Participants

Once you have definitely decided (via SWOT analysis or a similar tool) that sustainable tourism is worth investigating for your MPA and local community, the next step is to assess what the MPA potentially has to offer for tourists and whether or not sustainable tourism is logistically and financially viable.

Planning is a complex challenge that should be accomplished by an interdisciplinary team. Careful thought needs to be given to selecting team members to ensure that the team has the necessary skills, knowledge, and expertise to develop and guide the implementation of a plan.

A core team should be assembled consisting of:

- **a team leader/planner** (someone to lead the team through the framework)
- **a decision maker** (protected area manager, superintendent, etc.)
- **two or three key staff/specialists** of the protected area

It is essential that all of these individuals be part of the core team. In addition to the core team members, a variety of consultants will likely participate at different points in the



development of a plan.

Pointers for building the team

MPA staff should play a major role in the development of any sustainable tourism plan in the MPA, because they will be responsible for implementing it. If the plan is to succeed, it is important that the planning team cultivate staff understanding of and ownership in the plan.

Developing a plan may take a lot of time and effort. It is essential that before beginning work on a plan, the MPA manager and protected area staff are aware of the future work-load requirements and are willing and able to make the needed time commitments. This commitment must be strong throughout the planning effort. If team members do not attend meetings, do not do assigned work, or drop off the team, the chances significantly increase that the plan will fail. (The ability of people to commit to team participation may be one of the criteria in selecting team members.)

The core team should be kept relatively small (i.e., 3–7 members). It should include diverse perspectives and disciplines, and should represent a range of park staff and management. Since direction must be given to the planning team on numerous details, it is desirable to have the MPA manager on the core team. In instances where the manager cannot sit in, an assistant manager should participate. In the latter case, the manager should be regularly briefed on the status of the effort to avoid any surprises.

The core team should rely on consultants to provide additional skills and abilities. The number and types of consultants and the duration of their involvement will vary depending on the core team's needs and abilities, and the characteristics of the park. Some of these consultants could be from outside the MPA, including other agencies, stakeholders, and research institutions.

For sustainable tourism assessment, the planning team should include specialists in:

- Tourism development;
- Business analysis and marketing research;
- Local cultural heritage and history;
- Local wildlife, plants and other natural resources;
- Environmental and biodiversity conservation;
- Socio-economic development in rural areas;
- Local, regional and/or international tourism.

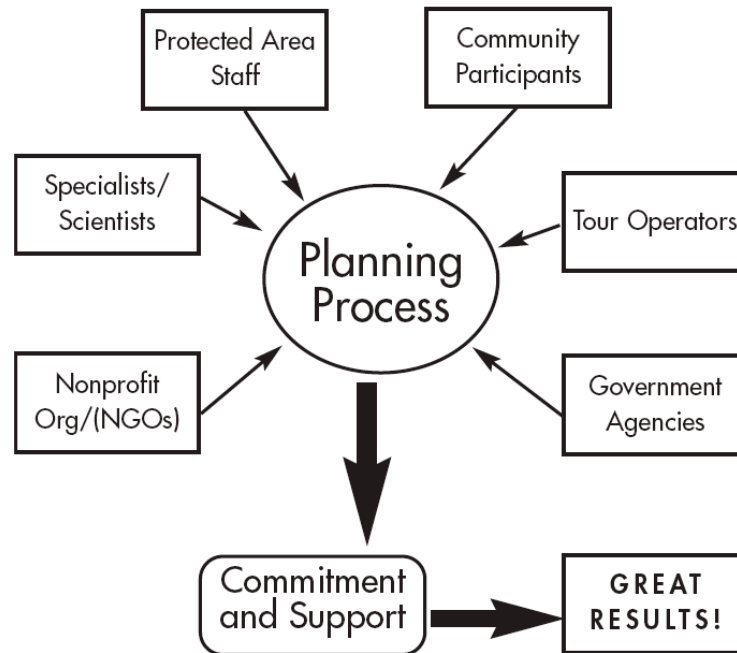
From time to time, the team may also benefit from the involvement of specialists in:

- Resource management
- Interpretation and education
- Social sciences
- Geographic information systems
- Public involvement
- Protected-area maintenance
- Concession management
- Landscape architecture
- Writers/editors
- Community planning
- Facilitators
- Historic site preservation

The planning team will typically arrange meetings and events to pull together a much larger and highly participatory team including as many stakeholders as possible. Local community organizations, tourism operations and governments should all be included. Some of these representatives may also be in a good position to provide lodging, transport or even some funding



for the planning team. For practical reasons, the small team will usually do most of the detailed assessment, administrative work, and will organize the planning meetings, but the larger team should be made to feel included in the entire process.



Source: Drumm & Moore 2005

Members of the local community should be included at the outset, including, if possible, representation on the small team. The active support of the local community is essential for the success of any sustainable tourism enterprise.

It is important to realize at the outset that the planning process will require funding and some time, often several weeks or months of dedicated work by the small team.

It is also important to be aware of possible gender issues as the team assembles the local participant group. Note that some societies assign different roles and responsibilities depending on gender. While the assessment team will want to be respectful of traditions, here is the time to make sure that everyone has the opportunity to be heard in the discussion. For example, which issues could be gender sensitive and therefore who would be the best candidate to represent and address that issue?

The assessment team should ultimately decide who the best candidates are and for which “locally-based” reasons. However, it is recommended that the selected candidates should have some or all of the following abilities and experiences:

- Ability to interact easily with fellow residents and visitors.
- Ability to listen to people without bias and to understand and articulate their expressed values, concerns and viewpoints.
- Ability to build rapport easily and create an atmosphere of comfort and trust.
- Recognition as a respected or influential member of the community.

**Exercise: Building your planning team**

Working in a small group for each MPA, take 15 minutes to decide on who you would like to have on the planning team for developing sustainable tourism at that MPA. The small group will then describe the “dream team” to the whole group (5 minutes) and describe why you want those people. Remember to refer to the “abilities and experiences” criteria on the previous page.

What information is needed?**Handout 4.4 - Information Inventories**

The assessment team can conduct an inventory of what the MPA has to offer tourists, and whether tourism can be economically feasible while also being culturally and environmentally responsible. Your team may wish to study the following aspects of your site, described in more detail in the accompanying handout. Are all of these topics relevant for your site? Should other topics be studied too?

Attractions Inventory—Attractions are the magnets that draw visitors to the destination. They include beautiful scenery, interesting species, cultural events (music festivals, etc.), and opportunities for certain activities (scuba diving, etc.).

Infrastructure and Services Inventory—Inadequate infrastructure, transportation, and basic services can hinder the development of a tourism destination, even those with unique attractions.

Market Demand—Market potential for a destination is determined by the assessment of the tourism trends and visitor profiles. Based on tourist demographic profiles, this assessment analyzes travel interest in the destination and identifies existing and future travel markets.

Competition—An assessment of the competition in the region can give the destination a clear idea of what competitors are doing and how to compete with other local destinations. Also consider destinations around the globe that offer similar products, because they are competing for the same tourists.

Human and Institutional Capacity—Tourism is a people-oriented business and depends on quality service from trained managers and employees.

Socio-Economic and Cultural Factors—The community’s attitudes and expectations, its developmental needs and priorities, and its socio-economic situation, are all important both for its capability to support tourism and for facilitating positive interactions between residents and tourists.

Conservation Impacts—A critical step is to assess the potential impacts, both negative and positive, of tourism development on biodiversity and the environment.

In the second half of today’s module you will have the opportunity to discuss some of these topics as they apply to your site.

How to get the information to characterize the MPA



Handout 4.5 - Information Sources

Review of Existing Written Materials

One of the first steps of the planning team should be to collect and review all of the written materials about the protected area that already exist and are relevant for tourism. These might include:

- the general management plan
- relevant legislation and policy documents
- scientific studies
- wildlife inventories
- visitor surveys and profiles
- tourism statistics for the MPA and nearby sites
- analyses of national tourism trends

Fieldwork

Thoroughly knowing and understanding the area is fundamental to developing a viable sustainable tourism plan. The planning team must obtain a comprehensive view of the MPA and everything that could affect ecotourism development (which is just about everything).

First, your team should **become familiar with the general layout** of the MPA, the location of the major natural and cultural features, actual and potential visitor sites and infrastructure within the MPA, and other nearby sites. Existing maps, aerial photographs, satellite images, and GIS analyses may be helpful.

Second, the team should **visit the MPA, taking a tourist's perspective**. The team should visit every site that has any potential whatsoever for sustainable tourism, remembering that a tourist can be anybody from backpacker who wants to hike and camp, to a senior citizen who wants to stay in a comfortable lodge or cabin. Often a research assistant can carry out an initial site exploration, taking photos and detailed notes to relay to the rest of the team. This data will identify key areas for further in-depth investigation and may rule out areas initially thought to have potential. **The full team should them make several trips, behaving as if they were tourists -- staying in the same local hotels, using area hiking trails and existing transportation, etc.** The team can ask questions such as:

- How long does it take to get from one place to another?
- Is the MPA accessible? Are sites within the MPA accessible?
- Where are the potential lodging sites?
- What are the major attractions?
- What are the activities that visitors might engage in?
- What are the obstacles?
- Is it safe?
- Is it comfortable?

Particular attention should be paid to existing zones or sectors, present and potential visitor sites, infrastructure such as guard posts, shoreline areas, hills and mountains, trails, camp sites, access points, lakes, streams, springs, etc.

(Keep these criteria in mind during the upcoming ETPS field trips.)

Discussion: Your own tourist experiences in the ETPS

Going around the group, every participant briefly describe which places you have travelled to in



the Eastern Tropical Pacific Seascape, and which were your favorites. Did you travel as a tourist, staying in typical tourist locations and lodgings? Do you feel that you have a good idea of what each location currently has to offer tourists, in terms of attractions, lodging, etc.? Compare your experiences with those of others in the group.

Gathering information from other people

Using **interviews, meetings, questionnaires or surveys**, the team can gather information from other people who have useful knowledge about the MPA or local community. Different people will have different perspectives. All of these perspectives are useful in some way. For example, a fisher person may be able to provide useful information about where certain reef fishes are most likely to be found - though a scuba diver may wish just to observe the fishes, not to catch them. Scientists may know the location and seasonality of unusual vegetation and wildlife, and the locations of fragile populations that may need extra protection. Local people may know about trails, potential attractions, accessibility and a host of other information. MPA personnel, especially on-site staff, are an essential source of information about the resources, visitor behavior, and local community relationships.

The perspective of tourism operators is also important. They know the tourists, and their preferences and expectations, better than any other participant. They can identify challenges and opportunities that others may not perceive. If little or no tourism is occurring at present, it will still be useful to interview any tourism operators who may be interested in future sustainable tourism. Their willingness to support sustainable tourism guidelines (limited visitor numbers, low impact, and economic benefit to the protected area and local communities) will be crucial.

4.3 GATHERING INFORMATION

Questions to guide the assessment

Handout 4.6 - Examples of Questions

Discussion: What questions do you want to ask?

In small group for each MPA, take 20 minutes to discuss what questions to ask when you do interviews, surveys, questionnaires, etc. Use the "Assessment Questions" handout for ideas, but remember it is not a complete list - you might develop additional important questions on your own.

Remember there are several different groups of stakeholders that you can seek information from - local residents, tour operators, tourists, etc. What are the most important questions for each? If you could ask only 3 questions to a resident, a local tour operator, and a tourist, what would those be?

Later, the whole group discuss their decisions briefly (10 minutes).

Natural Resources

This section includes every aspect of your MPA's natural resources - geography, climate, environment, biodiversity, endangered species, charismatic species, scenic values, vulnerable ecosystems, etc. Consider which can have potential as tourist attractions, and which may be vulnerable to tourism impacts. Consider also the seasonality of certain resources (e.g., weather,



migratory species, breeding seasons).

Cultural Resources

This category includes population profile, cultural background, local traditions and customs, resistance or acceptance of outside visitors, poverty and educational levels of local peoples, historical or archaeological sites, etc. This section also includes the historical, archaeological or current cultural sites and events that could act as attractions or in some way affect how ecotourism would be carried out.

Political and economic climate, including the protected area's status, i.e., whether there is adequate protection of the area's boundaries, and administrative and economic support for a quality sustainable tourism operation.

Visitor profiles - Since visitor interest and demand will drive any future ecotourism program, it is essential to fully understand the nature of current and potential visitor use. Consider who you want to attract, and then assess practically who you can attract. What types of people would be interested in the attractions that the MPA has? Where do they live and what are their interests? etc. It is unlikely that much information will be available; most likely, you will need to interview or survey current visitors, or visitors to nearby tourist attractions.

Tourism industry - Without the active support of experienced tour operators, a sustainable tourism operation in a protected area cannot be successful. First, assess the existing tourism industry - existing attractions, existing hotels and services, general trends in arrivals. Then seek tour operators to interview or survey about possible future involvement in sustainable tourism. Are tour operators prepared to work with the local communities? Are they willing to take steps to reduce their environmental impacts?

Communities - It is almost as important to have detailed information about the communities around the protected area as it is to understand the natural and cultural resources located within the protected area. Local people can have a huge influence upon any MPA management activity; this is especially true of sustainable tourism. Ideally, there should be a mutualistic relationship between the protected area and the communities adjoining it, each benefiting from the other.

Tools for gathering information

Some of the most widely used, and useful, tools for gathering information are interviews, questionnaires, visitor surveys, and meetings:

Interviews are the best way to gain detailed information and to involve a participant as fully as possible. The back-and-forth nature of a conversational interview allows participants to bring up valuable topics and insights that a pre-planned questionnaire might miss. Taking guests on field trips of the MPA is often a good opportunity for an extended interview that is enjoyable for all parties, and the sights seen may remind interviewees of important points that would otherwise have been overlooked.

Questionnaires and surveys are a useful tool for documenting the information obtained from interviews, and are essential if sample sizes are so large that face-to-face interviews are impractical. Questionnaires need to be short and well-designed, preferably by a professional, and should be field-tested on a small scale before widespread use. Often it is useful to do at least 2 surveys: one of visitors, and one of local residents.

The role of a questionnaire or survey:

- It is a set of specially designed questions to which answers are written on a prepared form.



- It tells you who your audience might be in demographic and psychographic terms.
- It tells you certain things about your audience's behavior and lifestyle.
- It is a way of finding out exactly what your audience knows and needs to know about your topic.
- It helps in the construction of a recommendation and in generating advertising to fund that recommendation.

(We will discuss surveys for visitors and local residents in more detail in later modules.)

Workshops and meetings are invaluable for bringing stakeholders together and promoting a fruitful exchange of ideas among all participants. They are essential for several reasons: First, they are a valuable means for obtaining practical information and opinions. Second, they make stakeholders feel involved in the planning process. Third, they are educational - while meetings should not be designed exclusively for this purpose, they can be used to inform people about the MPA, its objectives, and sustainable tourism.

There should always be follow-up to a workshop or other meeting - i.e. a summary of the meeting & the major points raised by participants, and an outline of any decisions and next steps. This should be disseminated to everybody who was at the meeting. This allows people to feel that the meeting was productive and that their opinions were listened to.

Case study – Tanzania

Handout 4.7 - Tanzania Coastal Management Partnership

In 2001, the Tanzania Coastal Management Partnership performed a thorough assessment of the potential for sustainable tourism along the Tanzanian coast. Like the member nations of the ETPS, Tanzania already receives a high volume of tourists, but did not yet have a coordinated plan for, or a full assessment of, the rural coast's ability to attract tourism. A Coastal Tourism Working Group traveled the entire Tanzanian coastline to perform three key inventories: attractions, accommodations, and accessibility. The group sought to identify particular locations where unique attractions were clustered together, and could be further developed for sustainable tourism, with suitable improvements in accommodations and accessibility. This approach brings together several of the tools that we will discuss below, and illustrates how a large-scale approach to coastal tourism can identify unique attractions and neighboring sites that can be linked together to more effectively attract tourists. These approaches can be directly applied to the ETPS, as we will see below.

4.4 ATTRACTIONS INVENTORY

We've discussed a huge range of different types of information that an MPA manager needs to assess the MPA's potential for sustainable tourism. Let's focus now on the potential tourist attractions in your own MPA.

Exercise: Attractions Inventory

Each MPA team set up at a different table. Take out any maps of your MPA that you have with



you, including the mapping project you did yesterday, and spread them out on the table to use during your inventory. Choose one map as your main working map. If possible, it should show not only the MPA but also any nearby communities - i.e. other places that tourists might go before or after visiting the MPA. You will mark the locations of attractions and infrastructure of different acetate overlays that you can place on top of this map.

Read the instructions below before you begin. Use handout 4.8 as your main worksheet to do the attractions inventory, and 4.9 to help rank the major attractions.

Handout 4.8 - Attractions Inventory

Handout 4.8- Ranking Attractions

Step 1: Listing Your MPA's Attractions

Use the worksheets to list the attractions in your MPA and make notes about each. The worksheets are standardized; modify them as needed to suit your MPA. Scan the categories below for ideas about what features in your MPA may qualify as tourist attractions. (These are suggestions only, not a complete list; you may discover other types of attractions in your own MPA.)

Natural Attractions: Physical features such as landscapes, lakes, forests, parks, beaches, caves, waterfalls, climates; and biotic features such as unique and endangered species, birds, reptiles, and other animals. Biodiversity and nature in general can be big tourism attractions.

Cultural Attractions: Examples of traditional lifestyles (e.g. public markets), rituals, religious ceremonies, festivals and other large events, chieftaincies, arts and crafts, music, dances, traditional cuisine, and local economic activities such as fishing, farming and salt preparation. These attractions are particularly important because not only do they draw tourists, but they also allow the tourist to learn about and support the local culture.

Historic and Heritage Attractions: Forts, castles, museums, churches, mosques, temples, distinctive architecture, archaeological sites, monuments, burial grounds, birthplaces/homes of famous people, early settlements, historic town centers and districts, landmarks, missions, shrines, churches, historic tours. If culturally acceptable, sacred places can also be included.

Recreational Activities: Boating, trekking, mountain climbing, hiking, camping, biking, river rafting, diving, snorkeling, wildlife viewing, bird watching, picnicking, sunbathing, relaxing, swimming, and playing sports and games.

Step 2: Mapping Attractions

To assess the relationship of all the attractions to each other, and the feasibility for tourists of traveling from one attraction to another. **Mark the location of each attraction on an acetate overlay, so that you can move it on and off of the map.** The easiest approach may be to do this by hand in pencil and use highlighters for color-coding. Later, the maps can be scanned into electronic format for purposes of reporting. GPS and GIS technology, if available, will greatly speed up this process.

Bear in mind that a "secondary" attraction may still draw tourists if it is near a "primary" attraction. (Primary attractions are those that can cause tourists to plan an entire trip just to see that attraction. Secondary attractions will usually draw tourists only if they are already in the area for some other reason.) An example of this is Victoria Falls in Southern Africa, which is a primary



attraction, meaning that tourists will plan a trip just to see Victoria Falls. However, once tourists arrive, they often stay a few days more to enjoy cultural events and safaris in the adjacent national park. Identifying and “packaging” primary and secondary attractions together can result in tourists lengthening their stay and having a greater economic impact. Inspect your map to see if secondary attractions at your MPA are within easy travel of a primary attraction.

Step 3: Rank and Evaluate Attractions

Using the worksheets, evaluate and rank the attractions for their potential to attract and draw in tourists. This will give your team a preliminary idea of the tourism development potential based on attractions in the area.

The following criteria may help evaluate the attractions:

- **Uniqueness**—How unique is the attraction? For instance, if it is a mountain lake or beach area, is it the only mountain or beach in the local area? Is there potential for it to draw international visitors or domestic visitors? Is it a primary or secondary attraction?
- **Aesthetic or Scenic Value**—This is a subjective measure. A scene can be appealing for different reasons - some scenes are dramatic, some are peaceful, and some are culturally or environmentally interesting. Consider vibrancy of colors, drama of landscape, distinct architectural or artistic values, and uniformity or contrasts in geological formations or the built environment. For example, consider the rich greens of a healthy rainforest as opposed to the consistent patterns of agricultural fields, brightly colored traditional houses of red clay or paints versus gray concrete buildings, or mangrove-lined lagoons with reflective waters versus brown-gray waters of a stagnant pond. Also consider cleanliness, lack of litter or graffiti, air quality and traffic noise.
- **Biodiversity**—Rate both flora and fauna on their rarity and uniqueness, and evaluate the possibility of viewing species. If animals are difficult to see, their tracks and other signs of their presence will still be interesting, although less so than actual sightings. Confirm with local experts and biologists the names of the species that exist in the area. Nature tourists typically love to see whales and other marine mammals, sea turtles, large breeding colonies of seabirds or pinnipeds, colorful tropical birds, and colorful reef fish. Birdwatchers will travel thousands of miles to see rare birds - but only if they know there is a high probability of actually seeing the bird. Also check with experts and the World Conservation Union’s (IUCN) endangered species lists to see any of your species are threatened and might need protection from tourist disturbance.
- **Cultural Value**—Consider whether attractions demonstrate the traditional lifestyle of a vibrant culture; any high-quality art and handicrafts that are unique to the area; and traditional festivals, dances and music. The authenticity of a cultural attraction is of great importance.
- **Historical Value**—Consider age, maintenance, artistic or architectural significance, its physical magnitude, and its cultural importance. Historical attractions that are mostly intact, well-understood, and that have understandable interpretive materials (signs, brochures) in several languages will have greater potential draw.
- **Uses and Activities**—What activities could a tourist do? How do the different uses or potential activities rate for each attraction? For example, a beach may rate high if it offers activities that are very attractive to the nature tourist, such as turtle watching, swimming, or scuba diving. Or, a certain trail may offer excellent opportunities for bird-watching or wildlife viewing.
- **Community Participation**—How could the community participate or benefit from tourist activity



at the attraction? For instance, a lodge might be able to employ 30 people and implement a boat tour that employs one or two people. Does the community have the capacity to participate - i.e. does it have fishermen with boats equipped to transport passengers? For cultural attractions, are community traditions still widely practiced?

• **Ability to Control Tourism at the Site**—Is the area largely public space? Who lives there, what permits are needed to use the land, and is there potential for clashes?

• **Access**—How easily can one get to the attraction? How long a walk is required to get to a beach or a trailhead? How often does a cultural activity occur?

• **Product Development**—How developed is the attraction? What would be involved in fully developing the attraction or product? For example, does the area need to be cleaned up? Is pollution an issue? What type of infrastructure might be needed such as accommodations, signage, access roads or trails? Perhaps the attraction is partially developed. For instance, an arts and crafts shop that already exists may simply need better inventory and an increased marketing effort.

4.5 INFRASTRUCTURE & CAPACITY

Now that you have a good picture of the potential tourist attractions in your area, let's consider whether your MPA and the local community has sufficient infrastructure to handle tourists. What development would need to occur before sustainable tourism could begin? Would tourists have high-quality food, lodging, and transportation? Do tourist attractions need refurbishment or explanatory materials? Do guides and boats exist for specialized tourist activities for such activities as scuba diving, bird watching, fishing, etc.?

An essential part of this process is keeping in mind the **carrying capacity** of your MPA - how many tourists can come without disrupting or destroying the resources? How much fresh water is available, for example, and can the area handle the sewage outflow from cruise ships or large hotels? (We will discuss carrying capacity in more detail in later modules.)

Handout 4.10 - Infrastructure and Services Inventory

Exercise: Infrastructure & Capacity Inventory

You will spend the next hour discussing the infrastructure of your MPA and local environment in these key areas:

- 1. Transportation & accessibility**
- 2. Public services** (police, electricity, water, sewage, etc.)
- 3. Environmental quality** (air quality, etc.)

Following the guidelines and questions in handout 4.10, make a new acetate overlay for your MPA's infrastructure. (You may wish to make different overlays for the different types of infrastructure. You can also assess infrastructure of any nearby communities, if you have sufficient information.)

Keep in mind that this information will form part of the basis for your tourism development decisions. For instance, your team might propose a different type of product if they find that there is not enough water to supply tourist facilities.



Additional information can be obtained using the following inventories:

Handout 4.11 - Supply and Competitiveness Inventory

Handout 4.12 - Labor Inventory

4.6 ASSESSING TOURISM'S FOOTPRINT

This is one of the most important assessments that the team will conduct. The goal is to anticipate the environmental impacts of tourism development. This will form a key element of your tourism assessment – one that determines whether to proceed with a project or product.

It is important to remember that it is not the team's role to "sell" particular concepts of tourism development to the community. Your role is to objectively analyze the information gathered throughout this assessment, flag potential issues and address opportunities for improvement. These considerations should then be used to guide what type of tourism development, if any, is appropriate.

Understanding Potential Environmental Benefits

As we have seen in other modules, tourism can result in substantial benefits to MPAs and local communities. Many of these benefits translate into benefits to the environment as well:

- **Financing for Conservation**—Revenues can be allocated to biodiversity conservation efforts through several mechanisms, including parks fees, lease fees and concessions, taxation, grants, and traveler donations.
- **Economic Alternatives**—Providing job creation and income generating activities to local communities as an alternative to more destructive livelihoods, such as slash and burn agriculture, over-fishing and illegal logging.
- **Constituency Building**—Local communities that benefit from tourism development are more motivated to conserve their unique natural and cultural heritages.
- **Impetus for Private Conservation**—Tourist demand for scenic, pristine natural surroundings and opportunities for wildlife viewing can provide an impetus to private investors to conserve areas in order to meet this demand.

However, poor planning or explosive growth of tourism can overwhelm natural resources and community infrastructure. For example, poorly planned tourism products can disturb wildlife habitats, degrade watersheds and pollute water systems, as well as add to solid waste management issues.

Understanding Negative Environmental Impacts

To guide research on potential negative environmental and biodiversity impacts, focus on the following key areas and questions. This list is simply a starting point to spur ideas - you might think of additional questions applicable to your area.

Flora and Fauna—Are there threatened plant, bird, mammal, reptile, amphibian, and fish species



in the destination? Where are their habitats? Why are they threatened? What is their relationship to tourism; i.e. do these species occur in potential tourism development areas? Are they also tourist attractions? In these cases, noisy crowds of tourists viewing wildlife could disrupt feeding and breeding cycles resulting in higher mortality rates and major decreases in population growth.

Critical Habitats—Which areas form critical habitats, why are these critical and how might tourism impact on them? Often animal species are threatened because their habitats are being lost. Especially problematic is loss of breeding, nesting and feeding grounds as a result of agriculture expansion, logging and other forms of human development. Some critical habitats may already be identified as such by being designated as nature reserves and sanctuaries, parks, protected areas, and core/intangible zones within established protected areas. Research and interviews with local experts will help identify those areas that aren't already protected and need to be considered.

Functioning Ecosystems—Tourism, along with human development, tends to occur in some of the most biologically diverse ecosystems. Coastal areas, rivers and lakes, mountains, rainforests, wetlands and grasslands are all popular recreation areas. Issues to consider include disruption of ecological processes and intricate dependencies among flora, fauna and physical attributes. For example, noise and lights which may prevent sea turtles from nesting on a beach; the clearing of vegetation along a river bank to improve the view causes soil erosion and destroys fish and frog habitats; and scuba divers and snorkelers damage reefs thus killing critical breeding grounds.

Biological Corridors and Physical Landscapes—Ensuring enough habitats for territorial and migration patterns and adequate access to food is critical to larger mammal species such as elephants, jaguars, or marlin. Tourism development can interrupt connecting areas of mountain systems, valleys, plains, and rainforests. For example, roads can pose barriers to some species like turtles, frogs and crabs; and oncoming traffic can result in the death of migrating species. At the same time, tourism can be planned to reduce fragmentation by increasing protection of an area from more destructive forms of development such as logging.

Water—Clean, unpolluted water sources from rivers, lakes, lagoons, and water catchment areas are important to all forms of biodiversity including tourists visiting a region. What are the main water resources for existing populations? Are they adequate? Are they well protected? What current issues exist with water supply? Would additional tourism exacerbate these issues, i.e. by causing pollution of precious resources or demand outweighing supply?

Energy Resources—In most areas, energy supply is an issue, which tourism can easily exacerbate. This can cause wider environmental issues such as air pollution from coal produced electricity. It can also lead to localized impacts on biodiversity. For example, in many areas overuse of fuel wood will lead to deforestation and loss of sources of food and important breeding sites for many bird and animal species. Further, discharges from the use of fuel such as oil, gas and diesel can overwhelm freshwater and marine habitats.

Waste Management Systems—Are the current systems adequate to safely dispose of sewage and solid waste? Can they handle any additional demand? In many regions, waste management systems do not have the capacity to effectively treat and dispose of solid waste and sewage. Does tourism pose a real danger to overwhelming existing systems and thus the natural environment? Unfortunately, tourism activities often produce significant amounts of waste and the Assessment Team will need to consider a range of potential issues regarding wastewater, sewage treatment and solid waste. The following are adapted from Conservation International's Center for Environmental Leadership in Business:

Wastewater comes mainly from washing, toilets and runoff. It can pollute water sources with



dangerous bacteria such as fecal coliform causing disease and infection or chemicals from detergents, herbicides and pesticides killing freshwater and marine species.

Poor sewage treatment can lead to pollution of ground and surface water and degradation of marine resources, such as coral reefs.

Solid waste is often collected in poorly designed waste dumps or discarded directly into oceans, rivers and lakes. Besides being visually unappealing, improperly disposed waste can leach contaminants causing severe water and soil pollution. Contaminants from toxic items such as paint cans and batteries are especially dangerous. Dump sites often breed flies, which spread disease in nearby communities, release offending odors, and can result in toxic fires.

Littering, especially in natural areas, can attract wildlife, exposing them to injuries and diseases, such as birds and fish attempting to ingest cigarette butts.

Development and Construction—What are the potential issues regarding the actual construction of facilities and infrastructure? Are there issues with sourcing building materials? What measures may need to be taken when developing sites? Tourism often has the highest impact on the environment and biodiversity during the development and construction phase. In many countries, developers often clear land of vegetation and trees in order to complete the boundary survey and prepare sites for construction. Critical nursery areas for many marine species are destroyed by clearing mangroves and filling in wetlands in order to create more land and beach areas. Shoreline development causes erosion, reducing water clarity and smothering reefs. Often building materials may be sourced from the local area. For example, logging for wood may cause deforestation, “sand mining” or sourcing gravel and stones from rivers and beaches cause major changes to the physical environment.

Introduction of Invasive Species—What are the current issues with transportation of exotic animals and plants? Often customs authorities, forest and agricultural departments will have information on key issues. Invasive species are perhaps the largest threat to biodiversity. They are non-native species of plants and animals that when introduced to an area become predators and/or compete for precious food and nutrient sources. Tourists can inadvertently introduce invasive species to an area. Often tourists will acquire exotic plants and animals and carry them to non-native habitats. Tourists may also transport fruit and vegetables that may host invasive species of insects.

Sources Of Information

The tourism footprint assessment begins by researching existing literature on tourism’s potential environmental impacts and threats to biodiversity. By exploring secondary sources, the team will be able to get a picture of key environmental and biodiversity issues in the destination. Research on specific impacts related to tourism, however, may not be as readily available. The combination of the team’s assessment so far on tourism development in the destination and local area expert opinion should provide a good basis to create a matrix of tourism’s potential environmental and biodiversity footprint.

Handout 4.13 - Sources of Information for Footprint Analysis

Note that the second page of handout 4.13 contains examples of questions to ask environmental experts.



Adding it all up: using a Footprint Matrix

To keep track of the overwhelming diversity of potential environmental effects, use a “footprint matrix” to fill in possible costs and benefits of tourism development.

Handout 4.14 – Footprint Analysis

Once the team has done all background research and interviewed experts, use the last column to indicate whether the overall impact of any potential tourism development would be positive, negative, or neutral using +, -, or 0. In making the judgment on whether to proceed with a project or product, consider the following types of issues related to the positive and negative impacts:

- Controllability;
- Likelihood of occurrence;
- Likely duration and magnitude;
- Breadth, depth, diffusion.

Exercise: Footprint Analysis

Complete a footprint analysis for your MPA, using the information that you have developed in the other tools used today.

Review the matrix to help decide whether tourism development overall would likely be a benefit or a cost to the area.

Exercise: The Big Picture

Each MPA team should now have a good idea of the attractions, infrastructure, and vulnerabilities of their own local area.

Each small group select one person to briefly present (5 minutes) their conclusions to the whole group.

Now, working in a large group, set up a map of the overall ETPS and mark the location of each MPA on it. Have one person list the MPAs on a poster board, and note briefly each one's unique attractions and features. Mark the locations of major air, roads, and ferry service. Mark the locations of other major attractions within the ETPS.

Identify places along the ETPS where attractions occur close together and could be marketed to tourists as part of a single tour package. How do your ideas connect with the tourism vision for the ETPS that you developed yesterday?